AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (*Currently Amended*) A device ~~Device~~ for compressing a list of destination addresses <u>for</u> ~~of~~ a multicast message, <u>wherein each destination address in said list represents a different host, said device</u> comprising:

means <u>for detecting</u> ~~to detect~~ a common prefix in at least two <u>different</u> destination addresses <u>from</u> ~~of~~ said list <u>of destination addresses,</u>

means <u>for generating a suffix list for</u> ~~to generate a sequence of suffixes of said at least two~~ destination addresses <u>from said list of destination addresses that are detected to have a common prefix, wherein said suffix list represents the non-identical portions of said detected destination addresses,</u> and

means <u>for adding said suffix list</u> ~~to add said sequence of suffixes~~ to said common prefix to thereby create a compound destination address.

2. (*Currently Amended*) The device <u>The device</u> ~~Device~~ for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses.

2

3. (*Currently Amended*) <u>The device</u> ~~Device~~ for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses and other compound destination addresses.

4. (*Currently Amended*) <u>The device</u> ~~Device~~ for compressing according to claim 1, wherein said list of destination addresses comprises other compound destination addresses.

5. (*Currently Amended*) <u>The device</u> ~~Device~~ for compressing according to claim 1, wherein said device is incorporated in a host of a communications network having connectionless multicast transmission capabilities.

6. (*Currently Amended*) <u>The device</u> ~~Device~~ for compressing according to claim 1, wherein said device is incorporated in a router of a communications network having connectionless multicast forwarding capabilities.

7. (*Currently Amended*) <u>A method</u> ~~Method~~ for compressing a list of destination addresses <u>for</u> ~~of~~ a multicast message, <u>wherein each destination address in said list represents a different host,</u> said method comprises:

detecting a common prefix in <u>at least two</u> <u>different</u> destination addresses <u>from</u> ~~of~~ said list <u>of</u> <u>destination addresses,</u>

3

generating a <u>suffix list for</u> ~~sequence of suffixes of said at least two~~ destination addresses <u>from</u>

<u>said list of destination addresses that are detected to have a common prefix, wherein said suffix list</u>

<u>represents the non-identical portions of said detected destination addresses</u>, and

adding said <u>suffix list</u> ~~sequence of suffixes~~ to said common prefix to create a compound

destination address.

8. (*Currently Amended*) <u>A router</u> ~~Router~~ of a communications network having connectionless

multicast forwarding capabilities, wherein said router incorporates a device for compressing a list

of destination addresses of a multicast message as defined by claim 1.

9. (*Currently Amended*) <u>A router</u> ~~Router~~ according to claim 8, wherein said router further

comprises:

a routing table memory, and

means to address said routing table memory via a compound address having the same format

as said compound destination address.

10. (*Currently Amended*) <u>A host</u> ~~Host~~ of a communications network having connectionless

multicast transmission capabilities, wherein said host incorporates a device for compressing a list

of destination addresses of a multicast message as defined by claim 1.

11. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said means for detecting ~~to detect~~ a common prefix detects octet-aligned prefixes.

12. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said means for detecting ~~to detect~~ a common prefix detects nibble-aligned prefixes.

13. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said means for detecting ~~to detect~~ a common prefix detects bit-aligned prefixes.

14. (*Currently Amended*) The method ~~Method~~ for compressing according to claim 7, wherein detecting a common prefix further comprises detecting octet-aligned prefixes.

15. (*Currently Amended*) The method ~~Method~~ for compressing according to claim 7, wherein detecting a common prefix further comprises detecting nibble-aligned prefixes.

16. (*Currently Amended*) The method ~~Method~~ for compressing according to claim 7, wherein detecting a common prefix further comprises detecting bit-aligned prefixes.